

WHAT IS CLAIMED IS:

- 5 sub A³
1. A method of making a plasma reactor component having one or more surfaces which are exposed to plasma during use, the method comprising plasma spraying a coating material onto a plasma exposed surface of the component to form a coating having surface roughness characteristics that promote the adhesion of polymer deposits.
 2. The method of claim 1, further comprising steps of;
roughening the plasma exposed surface of the component; and
cleaning the roughened surface prior to plasma spraying the coating material.
 3. The method of claim 1, further comprising cleaning exposed surfaces of the plasma sprayed coating.
 4. The method of claim 1, wherein the coating material is a ceramic or a polymeric material.
 5. The method of claim 1, wherein the component has openings therethrough, the method further comprising plugging the openings before plasma spraying the coating.
 6. The method of claim 1, further comprising removing the component from a plasma reaction chamber and cleaning the plasma exposed surface thereof by removing any existing coating and/or adhered polymer deposits therefrom prior to plasma spraying the coating onto the cleaned surface.

7. The method of claim 4, wherein the plasma sprayed coating is a ceramic material having a thickness of 2 to 5 mils.

8. The method of claim 4, wherein the component and the coating material comprise the same ceramic material.

5 9. The method of claim 4, wherein the coating material is a polyimide.

10. The method of claim 9, wherein the coating has a thickness of 10 to 30 mils.

10 11. The method of claim 1, wherein the component is selected from the group consisting of a plasma confinement ring, a focus ring, a pedestal, a chamber wall, a chamber liner and a gas distribution plate.

12. The method of claim 2, wherein the roughening step comprises bead blasting the surface of the component.

13. The method of claim 1, wherein the coating has an arithmetic mean surface roughness value (Ra) of between 150 and 190 micro-inches.

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~~14. A component of a plasma reactor, the component having one or more surfaces exposed to the plasma during processing, the component comprising a plasma sprayed coating on a plasma exposed surface thereof, wherein the coating has surface roughness characteristics that promote the adhesion of polymer deposits.~~

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to 30 mils.

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claim 14.

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one polymer forming species.

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